

BATCH DISTILLATION

Version 16.2

I. STARTUP PROCEDURE

A. Checklist

1. Confirm that water is flowing through the condenser.
2. Confirm that the pressure relief cork is lightly inserted in position.
3. Verify that there is a distillation containment vessel (of sufficient size to contain your expected product) in position under the product cooler.

B. Reflux Mode Selection

Total Reflux mode

1. Verify that the distillate valve is CLOSED
2. Verify that the power to the Reflux Controller is OFF

Normal Reflux mode

1. Verify that the distillate valve is OPEN. Note: Do not touch vapor recovery valve (see [diagram](#))
2. Adjust the Reflux Ratio to the desired setting.
3. Turn the Reflux Control button ON in the Labview control.

It is desirable for the column to switch frequently between the reflux and product modes in order to more closely approximate a steady state condition. This is controlled automatically.

C. Powering Up

1. Verify that all the switches on the power strip are off.
2. Turn ON the MAIN POWER switch.
3. Turn ON the COLUMN LIGHT switch.

This allows you to see the boiling behavior on the trays through the slit running down the front of the column.

4. Turn ON the HEATER POWER switch (Note the reboiler power output on the tag)
5. Turn on Main Power Switch on Labview VI
6. Turn on Reboiler Power Switch on the Labview VI

II Shut down Procedure

1. Turn off all of the manual power switches
2. Turn off the Main Power Switch and Reboiler Power Switch on the Labview VI.

Batch Distillation Column

Main Power Switch
 Off

Reflux Control

Reflux Ratio
100

Reboiler Power Switch

Specify Time between Data Points (sec)
1

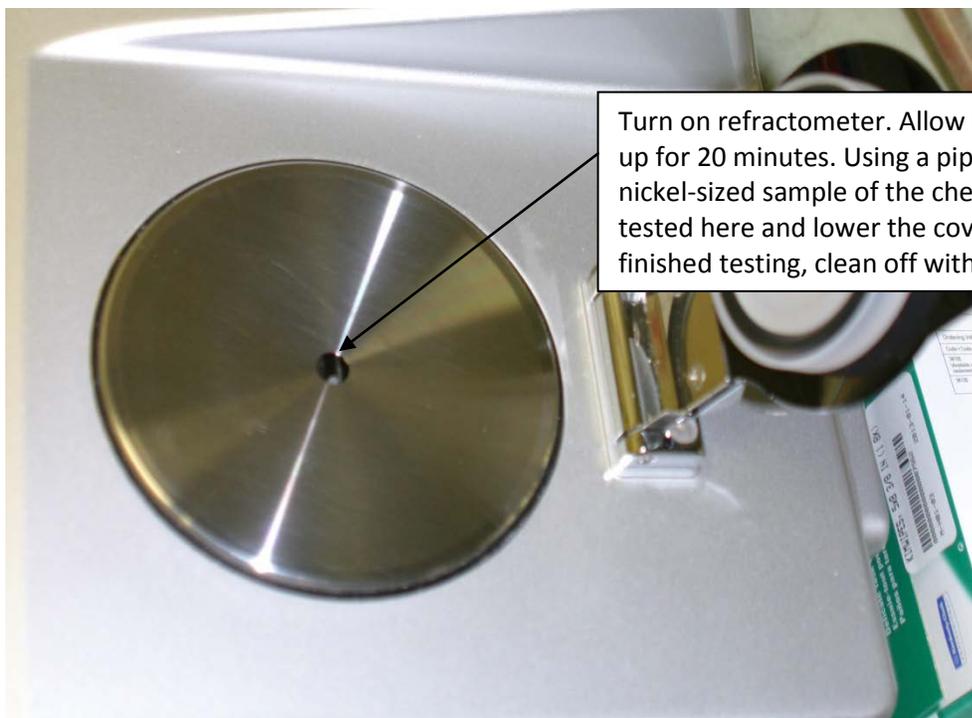
Specify number of data points
1

Push to Record

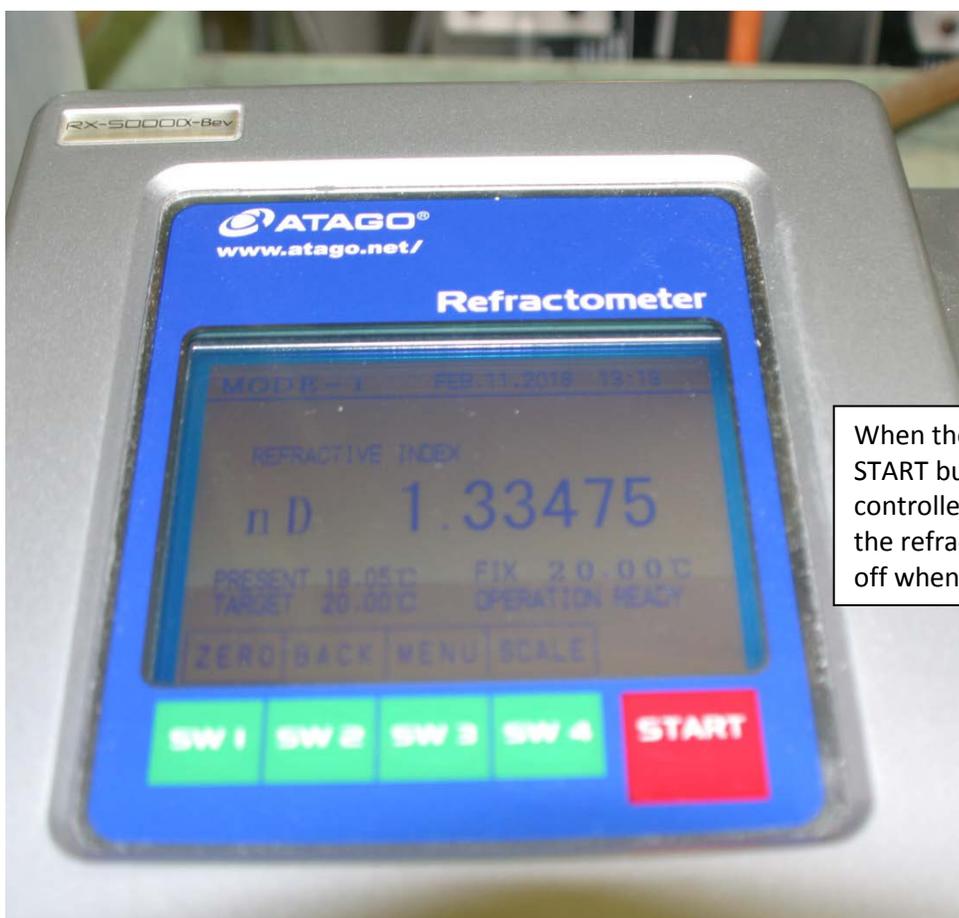
Data Point Count
0

Cancel Data Collection
Cancel

Refractometer instructions



Turn on refractometer. Allow it to warm up for 20 minutes. Using a pipette, place a nickel-sized sample of the chemical to be tested here and lower the cover. When finished testing, clean off with a Kim wipe.



When the sample is placed, press the red START button. The temperature will be controlled. The number listed after nD is the refractive index for the sample. Turn off when done using for the day.